

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION

5 Entitled : A METHOD AND APPARATUS FOR DETECTING AND
 LOCATING NOISE SOURCES NOT CORRELATED

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ABSTRACT OF THE DISCLOSURE

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 According to the invention, the method of detecting
and locating sources of noise each emitting respective
signals S_j with $j = 1$ to M , detection being performed
20 using sensors each delivering a respective time-varying
electrical signal s_i with i varying from 1 to N , consists
in taking the time-varying electrical signals delivered
by the sensors, each signal $s_i(t)$ delivered by a sensor
being the sum of the signals S_j emitted by the noise
25 sources, in amplifying and filtering the time-varying
electrical signals as taken, in digitizing the electrical
signals, in calculating the functional

$$f(\mathbf{n}_1, \dots, \mathbf{n}_j, \dots, \mathbf{n}_N) = \sum_{k \neq j} R_{k1}$$

 with coefficients R_{k1} being a function of the vectors \mathbf{n}_j
30 giving the directions of the noise sources, and in
minimizing the functional f in such a manner as to
determine the directions \mathbf{n}_j of the noise sources.